REMARKS

The Office Action dated November 2, 2007 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1-17, 19, 23-60, 77-92 and 97-100 have been amended to more particularly point out and distinctly claim the subject matter of the invention. Claim 101 has been cancelled. Claims 102-105 have been added. No new matter has been added. Claims 1-17, 19, 21-60, 77-92, 96-99 and 102-105 are submitted for consideration.

Claims 1-8, 12-17, 19, 21-23, 31-60, 77-96 and 98-100 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,574,473 to Rinne (hereinafter Rinne) in view of U.S. Patent No. 6,438,378 to Kouno (hereinafter Kouno). According to the Office Action, Rinne teaches all of the elements of claims 1-8, 12-17, 19, 21-23, 31-60, 77-96 and 98-100 except for teaching "a monitoring unit configured to monitor at least one parameter related to the connection between the mobile station and the end element." Therefore, the Office Action combined the teachings of Rinne and Kouno to yield all of the elements of claims 1-8, 12-17, 19, 21-23, 31-60, 77-96 and 98-100. The rejection is traversed as being based on references that neither teach nor suggest the novel combination of features clearly recited in claims 1-8, 12-17, 19, 21-23, 31-60, 77-96 and 98-100, and newly added claims 102-105.

Claim 1, upon which claims 2-8, 19, 21-37, 41-47, 51-57, 77-83, 96-97 and 102 depend, recites a network element including a monitoring unit configured to monitor at least

one parameter related to the connection between the mobile station and the end element. The network element also includes a determining unit configured to determine if the connection between the end element and the mobile station is to be released dependent solely on the at least one parameter monitored by the monitoring unit. The network element is configured between the mobile station and the end element and the connection is established between the mobile station and the end element via the network element.

Claim 9, upon which claims 10-11, 38-40, 48-50, 58-60 and 84-86 depend, recites a network element including monitoring means for monitoring at least one parameter related to the connection between the mobile station and the end element. The network element also includes determining means for determining if the connection between the end element and the mobile station is to be released dependent solely on the at least one parameter monitored by the means for monitoring. The at least one parameter includes an elapsed time since the last use of the connection, and the determining means determines that the connection is to be released if the monitoring means indicates that the connection has not been used for a predetermined time. The network element is configured between the mobile station and the end element and the connection is established between the mobile station and the end element via the network element.

Claim 12, upon which claim 87 depends, recites a network element including monitoring means for monitoring at least one parameter related to the connection between the mobile station and the end element. The network element also includes determining means for determining if the connection between the end element and the

mobile station is to be released dependent solely on the at least one parameter monitored by the means for monitoring. The at least one parameter includes a state of the mobile station, and the determining means is arranged to determine if the connection is to be released based on the state of the mobile station determined by the monitoring means. The network element is configured between the mobile station and the end element and the connection is established between the mobile station and the end element via the network element.

Claim 13, upon which claims 14-15 and 88-90 depend, recites a network element including monitoring means for monitoring at least one parameter related to the connection between the mobile station. The network element also includes determining means for determining if the connection between the end element and the mobile station is to be released dependent solely on the at least one parameter monitored by the means for monitoring. The at least one parameter includes a movement of the mobile station, and the determining means is arranged to determine if the connection should be released based on the movement of the mobile station monitored by the monitoring means. The network element is configured between the mobile station and the end element and the connection is established between the mobile station and the end element via the network element.

Claim 16, upon which claims 17 and 91-92 depend, recites a network element including monitoring means for monitoring at least one parameter related to the connection between the mobile station and the end element. The network element also

includes determining means for determining if the connection between the end element and the mobile station is to be released dependent solely on the at least one parameter monitored by the means for monitoring. The at least one parameter includes a location of the mobile station, and the determining means is arranged to determine if the connection should be released based on the location of the mobile station monitored by the monitoring means. The network element is configured between the mobile station and the end element and the connection is established between the mobile station and the end element via the network element.

Claim 98, upon which claims 100 depends, recites a radio network controller including a processor arranged to monitor at least one parameter of the connection established between the mobile station and the end element and to determine if the connection between the end element and the mobile station is to be released dependent solely on the at least one parameter. The radio network controller is implemented in a communication network. The apparatus is configured between the mobile station and the end element. The connection is established between the mobile station and the end element via the radio network controller.

Claim 99, upon which claims 103-105 depend, recites a method including establishing a connection between a mobile station and an end element in a communication network through a radio network controller arranged between the mobile station and the end element. The method also includes monitoring, at the radio network controller, at least one parameter related to the connection between the mobile station and the end element. The

method further includes determining, at the radio network controller, if the connection between the end element and the mobile station is to be released dependent solely on the at least one parameter.

As outlined below, Applicants submit that Rinne and Kouno do not teach or suggest the elements of claims 1-8, 12-17, 19, 21-23, 31-60, 77-96, 98-99 and 102-105.

Rinne relates to handovers between radio network controllers inside a generic radio network. Rinne discloses a method and system for controlling radio communications between a terminal and a communications system. A communications connection between the system and the terminal is established by an active radio network controller and an active base station. A connection is assigned to an anchor radio network controller through which the user data are directed. In one embodiment, data communications within the communications connection is directed to the active radio controller by a second/anchor radio network controller. See at least Col. 4, line 25- Col. 6, line 21 of Rinne.

Kouno discloses that a mobile communication system actualizing a handoff is constructed by a mobile station, a first base transceiver station having a first radio communication area of a CDMA system, a second base transceiver station having a second radio communication area of a non-CDMA system, receiver stations and a base station controller. The mobile station travels from the first radio communication area to the second radio communication area while communicating with the first base transceiver station. When the mobile station detects an event that an Ec/Io value of a pilot signal

transmitted from the first base transceiver station exceeds a first threshold value, the base station controller determines the receiver stations which are located adjacent to the second base transceiver station. Then, the base station controller requests the receiver stations to receive uplink traffic signals respectively transmitted from the mobile station. Within the receiver stations, the base station controller selects a receiver station receiving the uplink traffic signal having a best Eb/No value, which is compared with a second threshold value. When it exceeds the second threshold value, the base station controller requests the mobile station to perform hard handoff from the first base transceiver station to the second base transceiver station while simultaneously requesting the second base transceiver station to enable handoff. Thus, it is possible to broaden the radio communication area of the CDMA system in a direction toward the service area of the non-CDMA system at a hard handoff mode.

Applicants submit that the combination of Rinne and Kouno does not teach or suggest the combination of elements recited in the presently pending claims. The Office Action acknowledged that Rinne does not disclose or suggest monitoring the connections established between the mobile station and the end element, as recited in the presently pending claims. Rinne also does not teach or suggest determining if the connection between the end element and the mobile station is to be released dependent solely on the at least one parameter monitored, as recited in the pending claims. Applicants submit that Rinne does not carry out any monitoring of the signal but is directed to only carrying out

a handover action upon receiving a request to perform a handover. In this respect, Applicants submit that Rinne is purely reactionary.

Kouno does not cure the deficiencies of Rinne, as outlined above. In particular, Kouno does not teach or suggest monitoring the connections established between the mobile station and the end element and determining if the connection between the end element and the mobile station is to be released dependent solely on the at least one parameter monitored, as recited in the presently pending claims. In the "Response to Arguments" section, the Office Action cited Col. 4, lines 24-35 of Kouno which disclose that "the base station controller selects the receiver station which receives the uplink traffic signal of the best quality within receiver stations receiving the uplink traffic signals of the mobile station." The Office Action thus alleged that comparing the signal quality to a threshold value, as disclosed in Kouno, is equivalent to "monitoring", as recited in the pending claims. The Office Action further alleged that releasing the connection if the signal quality is above the threshold value, such that the handoff is contingent on the signal quality, as disclosed in Kouno, is equivalent to determining if the connection between the end element and the mobile station is to be released dependent solely on the at least one parameter monitored, as recited in the presently pending claims.

Applicants submit, however, that the cited sections of Kouno do not teach or suggest that the element does any monitoring or determination by itself. Instead the element of Kouno only receives measurement reports on the measurements conducted elsewhere and mainly from the receiver stations.

Figure 4 discloses the process described in Kouno. In Step 1 of Figure 4, a mobile station measures the pilot signal strength. See Col. 6, lines 40-42 of Kouno. The strength is compared to a first threshold, in Step 2, and if it is higher than the first threshold, the mobile station issues a report to this effect to the base station controller, in Step 3. See Col. 6, lines 42-43 and 56-58 of Kouno. In Step 4, the base station controller determines if there are candidate receiver stations (base stations) adjacent to the current base station, and if there are, the base station controller issues measurement directive to effect adjacent receiver stations to measure a signal strength of a signal transmitted by the mobile station, in Step 5. See Col. 6, lines 60-64 and Col. 7, lines 1-5. In Steps 6-8, the adjacent receiver stations receive the signal from the terminal and measure the strength of the signal from the mobile station; the receiver stations report their measurement results to the base station controller which selects the strongest measured signal; and the base station controller compares the strongest measurement of the signal strength to a second threshold, which is the received signal strength of the base station currently serving the terminal. See Col 7, lines 13-15, 15-21 and 23-33 of Kouno. Step 9 and Col. 7, lines 53-60 of Kouno, disclose that if the strongest measured signal is stronger than the signal received by the currently serving base station, a handover is then commanded by the base station controller.

The Office Action alleged that the handoff in Kouno is only performed based on signal quality. Nevertheless, this is not equivalent to determining if the connection between the end element and the mobile station is to be released dependent solely on the

at least one parameter monitored, as recited in the presently pending claims. Although Step 8 of Figure 4 of Kouno discloses measuring the signal strength to a second threshold which is the received signal strength of the base station currently serving the terminal, the signal quality element is not the sole handover release factor. Furthermore, even in isolation, Step 8 of Figure 4 of Kouno does not teach or suggest performing any steps based solely on at least one parameter monitored by the base station controller, as recited in the pending claims. The decision in Step 8 of Figure 4 of Kouno depends on both the signal strength measured by the strongest candidate receiving station and also the signal strength measured by the base station currently serving the terminal.

Thus, from the point of view of the base station described in Kouno, in order for the connection to be released, the following operations must be carried out. The base station controller must receive a report from the terminal according to Step 3 of Figure 4 of Kouno. The base station controller must send a directive to at least one candidate receiving station to measure the signal from the terminal, as described in Step 5 of Figure 4 of Kouno. The base station controller must receive a report on the signal strength measured by the base station currently serving the terminal, as discussed in Step 8 of Figure 4 of Kouno. The base station controller must receive at least one report on the signal strength measured by the candidate receiving stations, as discussed in Step 7 of Figure 4 of Kouno. The base station controller must command a handover to be triggered, as discussed in Step 9 of Figure 4 of Kouno. Kouno also implies that the base station controller handover signaling has to be performed successfully.

The above actions of the base station controller are not equivalent to an operation where the process is determined solely on at least one parameter relating to the connection between the mobile station and the end element. As noted in Applicant's Response filed on July 27, 2007, Col. 4, lines 24-31 of Kouno discloses that the base station controller measures and compares the E_b/N_o values for several "connections" from the mobile station to the base transceiver station and makes the selection from this value. The apparatus, thus, receives monitored reports and determines a handover using more than just the connection between the mobile station and the end element, and in fact is also dependent on the monitored report from at least one further base transceiver station and mobile station.

Based on the discussion above, Applicants respectfully assert that the rejection under 35 U.S.C. §103(a) should be withdrawn because neither Rinne nor Kouno, whether taken singly or combined, teaches or suggests each feature of claims 1, 9, 12, 13, 16, 98 and 99. Applicants submit that claims 2-8, 12, 13-15, 17, 19, 21-23, 31-60 and 77-96 should be allowed at least because of their dependence of claims 1, 9, 12, 13, 16, 98 and 99, as well as, because of the additional limitations recited in claims 2-8, 12, 13-15, 17, 19, 21-23, 31-60 and 77-96.

Claims 9-11, 24-30 and 101 were rejected under 35 U.S.C. 103(a) as being unpatentable over Rinne in view of U.S. Patent No. 4,443,875 to Blausten (hereinafter Blausten). According to the Office Action, Rinne teaches all of the elements of claims 9-11, 24-30 and 101 except for teaching that "at least one parameter includes an elapsed

time since the last use of the connection, and the determining means determines that the connection is to be released if the monitoring means indicates that the connection has not been used for a predetermined time." Therefore, the Office Action combined the teachings of Rinne and Blausten in an effort to yield all of the elements of claims 9-11, 24-30 and 101. The rejection is traversed as being based on references that neither teach nor suggest the novel combination of features clearly recited in claims 9-11 and 24-30. Claim 101 has been cancelled.

Rinne is discussed above. Blausten describes a method and apparatus for providing a call clearance system in a packet switched data network. The apparatus in Blausten detects a request for an originating terminal to end a call and delays the request for a predetermined time period in order to prevent the end of call message arriving before any delayed data.

Blausten does not cure these deficiencies of Rinne, as noted above. Specifically, Blausten does not teach or suggest monitoring at least one parameter related to the connection between the mobile station and the end element and determining if the connection between the end element and the mobile station is to be released dependent solely on the at least one parameter monitored by the means for monitoring, as recited in claims 9-11 and 24-30.

As acknowledged in the Office Action, Rinne also does not teach or suggest the at least one parameter includes an elapsed time since the last use of the connection, and the determining means determines that the connection is to be released if the monitoring

means indicates that the connection has not been used for a predetermined time. The Office Action cited Blausten to cure this deficiency of Rinne. Specifically, the Office Action alleged that in Blausten a determination of the elapsed time as a parameter can be found.

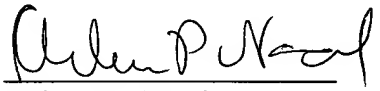
However, there is no teaching or suggestion in Blausten of monitoring a 'connection' for a parameter of an elapsed time since the last use of the connection, as recited in claims 9-11 and 24-30. In Blausten, once the apparatus receives the request to terminate the call there is no further monitoring of the communication. Rather, in Blausten, the communication is automatically ended after a predetermined time period. Therefore, Applicants respectfully assert that the rejection under 35 U.S.C. §103(a) should be withdrawn because neither Rinne nor Blausten, whether taken singly or combined, teaches or suggests each feature of claims 9-11 and 24-30.

As noted previously, claims 1-17, 19, 21-60, 77-92, 96-99 and 102-105 recite subject matter which is neither disclosed nor suggested in the prior art references cited in the Office Action. It is therefore respectfully requested that all of claims 1-17, 19, 21-60, 77-92, 96-99 and 102-105 be allowed, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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Enclosures: Request for Continued Examination (RCE) Transmittal
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